

Claims

1. A method for threading a web into a machine (01) having a threading means (06) that may be conveyed along a threading path to which the material web may be coupled and which may be driven by means of one motor (11) in a receiving area and one motor (21) in the delivery area for the web, with the first of the two motors (11; 21) being regulated to a threading speed (v_{soll}) that may be predetermined, characterized in that the second motor (21; 11) is regulated with regard to a torque existing on the motor (21; 11) that may be predetermined.
2. The method in accordance with Claim 1, characterized in that the first motor (11; 21) is regulated with regard to its engine speed.
3. The method in accordance with Claim 1, characterized in that the first motor (11; 21) is regulated with regard to its frequency using a frequency converter (13).
4. The method in accordance with Claim 1, characterized in that each of the two motors (11; 21) drives a spool body (07; 08) upon which the threading means (06) may be alternately wound and unwound.
5. The method in accordance with Claims 1 and 4, characterized in that the regulation of the

first motor (11; 21) depends on a current spool diameter (D07; D08) of at least one of the spool bodies (07; 08).

6. The method in accordance with Claim 5, characterized in that in a control device (12), a target value (\dot{n}_{soll}) for a frequency to load the motor (11; 21) is calculated dependent upon a spool diameter (d07; d08).

7. The method in accordance with Claim 5, characterized in that the current spool diameter (D07; D08) depends on a number of wound or unwound layers and a thickness d06 of the threading means (06) as well as an initial diameter or base diameter (d07; d08) of a spool body (07; 08).

8. The method in accordance with Claim 7, characterized in that the number of wound or unwound layers is calculated as a number of rotations by means of a resolver (19; 19') on the spool body (07; 08) or its drive (11; 21).

9. The method in accordance with Claim 8, characterized in that the calculation of the number of rotations is made using the spool body (08) in the receiving area.

10. The method in accordance with Claim 8, characterized in that the calculation of the number of rotations is made using the spool body (07) in the delivery area.

11. The method in accordance with Claim 1, characterized in that, in threading operation, the first motor (11), which may be regulated to a threading speed (v_{soll}) that may be predetermined, drives the threading means (06) in the delivery area and the second motor (21), which is regulated with regard to a torque that may be predetermined, drives the threading means (06) in the receiving area.

12. The method in accordance with Claim 1, characterized in that, in threading operation, the first motor (11), which may be regulated to a threading speed (v_{soll}) that may be predetermined, drives the threading means (06) in the receiving area and the second motor (21), which is regulated with regard to a torque that may be predetermined, drives the threading means (06) in the delivery area.

13. The method in accordance with Claim 1, characterized in that the motor (11) driving the threading means (06) and a rotary drive (17; 18; 20) of at least one mechanically independent aggregate (02; 03; 05) of the machine (01) are regulated or correlated with one another regarding their speed.

14. The method in accordance with Claim 1, characterized in that, in threading operation, the motor (11) driving the threading means (06) and a drive (18) driving a reel changer (03) are driven in correlation with one another regarding their speed by means of a machine control (16).

15. The method in accordance with Claim 1, characterized in that, in threading operation, the motor (11) driving the threading means (06) and a drive (17) driving a printing unit (02) are driven in correlation with one another regarding their speed by means of a machine control (16).

16. The method in accordance with Claim 1, characterized in that, in threading operation, the second motor (21) is driven in a torque-limiting manner by way of a servo control of a control device (12).

17. A device for threading a web into a machine (01) having a threading means (06) that may be conveyed along a threading path to which the web may be coupled and which may be driven by means of one motor (11) in the receiving area and one motor (21) in the delivery area for the web, with the first of the two motors (11; 21) being regulated with regard to its speed and/or engine speed, characterized in that the second motor (21; 11) is embodied as being regulated with regard to an existing torque that may be predetermined.

18. The device in accordance with Claim 17, characterized in that the first motor (11) has a signal connection to a control device (12) that is constructed so as to produce a frequency signal for the motor (11) from a predetermined threading speed (v_{soll}).

19. The device in accordance with Claim 18, characterized in that the control device (12) has

a signal connection to a machine control (16) by means of which the control device (12) is provided with a target value for the predetermined threading speed (v_{soll}).

20. The device in accordance with Claim 19, characterized in that the machine control (16) has a signal connection with one drive (17; 18; 20) of another aggregate (02; 03; 05) that is driven in a mechanically independent manner from the motor (11) for the purpose of transmitting signals that are relevant to speed.

21. The device in accordance with Claim 17, characterized in that a machine control (16) is provided that is constructed for the purpose of transmitting correlating signals that are relevant to speed to the motor (11) as well as to one drive (17; 18; 20) of another aggregate (02; 03; 05) that is driven in a mechanically independent manner from the motor (11).

22. The device in accordance with Claim 20 or 21, characterized in that the machine control (16) has an electronic guide axis (Φ) from which signals that are relevant to speed are transmitted during threading operation to the motor (11) as well as to the drive (17; 18; 20) of the aggregate (02; 03; 05).

23. The device in accordance with Claim 17, characterized in that the motors (11; 21) are each arranged to drive one spool body (07; 08).

24. The device in accordance with Claim 23, characterized in that a sensor (19, 19') that detects the number of rotations or angular degrees that have been passed through is located on at least one spool body (07; 08) or its drives.

25. The device in accordance with Claims 18 and 24, characterized in that the control device (12) has a calculating means that is constructed to produce a frequency signal for the motor (11) based on the predetermined threading speed (v_{soll}) and the number of rotations or the angular degrees that have been passed through.

26. The device in accordance with Claim 17, characterized in that the second motor (11) has a signal connection with a control device (14) that is constructed for the purpose of regulating the motor (11) with regard to maintaining a torque.